

Jan Delaval

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SEARCH REQUEST FORM

Scientific and Technical Information Center

Access DB# 65130
Jan Delaval
Reference Librarian
Biotechnology & Chemical Libran
CM1 1E07 - 703-308-4498
jan.delaval@uspto.gov

Requester's Full Name: My-Chan Tran Examiner #: 78933 Date: 4/23/02
Art Unit: 1641 Phone Number 30 5-6999 Serial Number: 09/833,030
Mail Box and Bldg/Room Location: CM1, 8A16 Results Format Preferred (circle): PAPER DISK E-MAIL
7E12

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

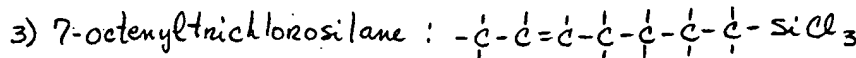
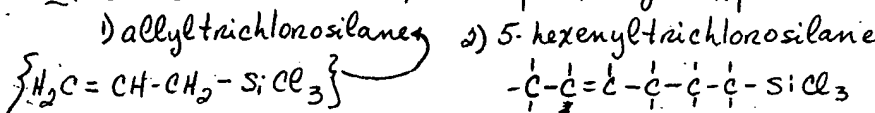
Title of Invention: Method for Obtaining a Surface Activation of a Solid Support for building biochip
Inventors (please provide full names): Laszlo Hevesi, Laurent Jeanmart, microarrays
and Jose Remacle

Earliest Priority Filing Date: 9/1/2000

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Mrs. Delaval: I would like to request the following searches:

I. Structure search of the following compounds:



a) Search for "I." (structure above) and oxidation
(I'm looking for the oxidation of a double bond to form an aldehyde)

b) Search for oxidation of an olefin (alkene, vinyl) to form an aldehyde
(prefer using permanganate or periodate). This is use to couple a biomolecule through the aldehyde.

c) Search for the following fragment: $\{O-Si-(CH_2)_{1-10}-CH_2\}$

As an aid for the search I have attached claims 1-9 and fig. 1, which is the oxidation procedure of interest.

STAFF USE ONLY

Searcher: Jan
Searcher Phone #: 4498
Searcher Location: _____
Date Searcher Picked Up: 4/30/02
Date Completed: 4/30/02
Searcher Prep & Review Time: _____
Clerical Prep Time: 20
Online Time: + 50

Type of Search

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) ☒
Bibliographic _____
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN ☒
Dialog _____
Questel/Orbit _____
Dr.Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

Thank you
!!

=> fil reg

FILE 'REGISTRY' ENTERED AT 13:53:40 ON 30 APR 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2002 American Chemical Society (ACS)

STRUCTURE FILE UPDATES: 29 APR 2002 HIGHEST RN 409058-68-0
DICTIONARY FILE UPDATES: 29 APR 2002 HIGHEST RN 409058-68-0

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

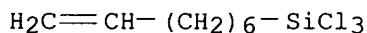
Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d l115 ide can tot

L115 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2002 ACS
RN 52217-52-4 REGISTRY
CN Silane, trichloro-7-octenyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 7-Octenyltrichlorosilane
CN Trichloro-7-oct-1-enylsilane
CN Trichloro-7-octenylsilane
FS 3D CONCORD
MF C8 H15 Cl3 Si
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMCATS, CHEMLIST, CSCHEM, IFICDB,
IFIPAT, IFIUDB, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

18 REFERENCES IN FILE CA (1967 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
18 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:235824

REFERENCE 2: 135:69141

REFERENCE 3: 133:199155

REFERENCE 4: 131:23961

REFERENCE 5: 130:183002

REFERENCE 6: 129:22700

REFERENCE 7: 128:108533

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Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 - 703-308-4498
jan.delaval@uspto.gov

REFERENCE 8: 128:68589

REFERENCE 9: 126:278041

REFERENCE 10: 121:30489

L115 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2002 ACS

RN 18817-29-3 REGISTRY

CN Silane, trichloro-5-hexenyl- (8CI, 9CI) (CA INDEX NAME)

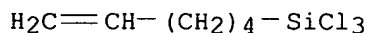
OTHER NAMES:

CN Trichloro-5-hexenylsilane

FS 3D CONCORD

MF C6 H11 Cl3 Si

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, CSCHEM, GMELIN*,
IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

23 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

23 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:235824

REFERENCE 2: 133:313533

REFERENCE 3: 133:238364

REFERENCE 4: 129:22700

REFERENCE 5: 128:217994

REFERENCE 6: 128:168254

REFERENCE 7: 128:108533

REFERENCE 8: 128:68589

REFERENCE 9: 127:195986

REFERENCE 10: 123:33377

L115 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2002 ACS

RN 107-37-9 REGISTRY

CN Silane, trichloro-2-propenyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Silane, allyltrichloro- (6CI, 7CI, 8CI)

OTHER NAMES:

CN Allyltrichlorosilane

CN Propen-3-yltrichlorosilane

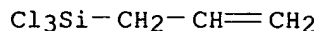
FS 3D CONCORD

MF C3 H5 Cl3 Si

CI COM

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS,
CHEMINFORMRX, CHEMLIST, CHEMSAFE, CSCHEM, DETHERM*, GMELIN*, HODOC*,
HSDB*, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, RTECS*, SPECINFO, SYNTHLINE,

TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



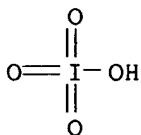
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

180 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
180 REFERENCES IN FILE CAPLUS (1967 TO DATE)
57 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:235824
REFERENCE 2: 136:183933
REFERENCE 3: 136:37742
REFERENCE 4: 135:357979
REFERENCE 5: 135:357689
REFERENCE 6: 135:344525
REFERENCE 7: 135:318114
REFERENCE 8: 135:211149
REFERENCE 9: 135:195958
REFERENCE 10: 135:107375

=> d l116 ide can tot

L116 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2002 ACS
RN 7790-28-5 REGISTRY
CN Periodic acid (HIO4), sodium salt (8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Sodium periodate (NaIO4) (6CI)
OTHER NAMES:
CN Monosodium metaperiodate
CN Periodic acid sodium salt
CN Sodium metaperiodate
CN Sodium metaperiodate (NaIO4)
CN Sodium periodate
MF H I O4 . Na
CI COM
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT,
CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST,
CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, IFICDB,
IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PIRA, PROMT,
RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)
CRN (13444-71-8)



● Na

1331 REFERENCES IN FILE CA (1967 TO DATE)
 13 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 1334 REFERENCES IN FILE CAPLUS (1967 TO DATE)
 44 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:268221
 REFERENCE 2: 136:262992
 REFERENCE 3: 136:262767
 REFERENCE 4: 136:244596
 REFERENCE 5: 136:235824
 REFERENCE 6: 136:231241
 REFERENCE 7: 136:216378
 REFERENCE 8: 136:202009
 REFERENCE 9: 136:163490
 REFERENCE 10: 136:134954

L116 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2002 ACS

RN 7722-64-7 REGISTRY

CN Permanganic acid (HMnO4), potassium salt (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN C.I. 77755

CN Cairox

CN Chameleon mineral

CN Condly's crystals

CN Permanganic acid potassium salt

CN Potassium permanganate

CN Pure Light E 2

MF H Mn O4 . K

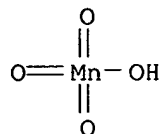
CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
 CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX,
 CHEMLIST, CIN, CSCHM, CSNB, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE,
 ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, HSDB*, IFICDB, IFIPAT,
 IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PROMT,
 RTECS*, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
 (*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

CRN (13465-41-3)



● K

7139 REFERENCES IN FILE CA (1967 TO DATE)
 33 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 7149 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:285771
 REFERENCE 2: 136:284565
 REFERENCE 3: 136:283577
 REFERENCE 4: 136:280217
 REFERENCE 5: 136:279004
 REFERENCE 6: 136:271712
 REFERENCE 7: 136:269637
 REFERENCE 8: 136:268284
 REFERENCE 9: 136:267768
 REFERENCE 10: 136:267570

=> d sta que 187
 L68 STR

O—Si
 1 2

NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 2

STEREO ATTRIBUTES: NONE
 L74 STR

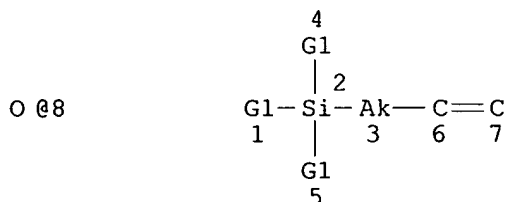
X—Si
 1 2

NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 2

STEREO ATTRIBUTES: NONE

L80 378147 SEA FILE=REGISTRY SSS FUL L68
L81 30254 SEA FILE=REGISTRY SSS FUL L74
L82 403549 SEA FILE=REGISTRY ABB=ON PLU=ON (L80 OR L81)
L85 STR



VAR G1=8/X

NODE ATTRIBUTES:

CONNECT IS M1 RC AT 8
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L87 293 SEA FILE=REGISTRY SUB=L82 CSS FUL L85

100.0% PROCESSED 119358 ITERATIONS
SEARCH TIME: 00.00.06

293 ANSWERS

=> d ide can tot 1117

L117 ANSWER 1 OF 10 REGISTRY COPYRIGHT 2002 ACS

RN 147766-60-7 REGISTRY

CN Propanal, 3-(diethoxyhydroxysilyl)- (9CI) (CA INDEX NAME)

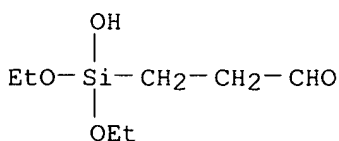
FS 3D CONCORD

MF C7 H16 O4 Si

SR CA

LC STN Files: BEILSTEIN*, CA, CAPLUS

(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

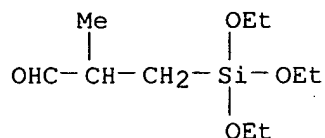
1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 118:254997

L117 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2002 ACS
 RN 88276-93-1 REGISTRY
 CN Propanal, 2-methyl-3-(triethoxysilyl)- (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C10 H22 O4 Si
 LC STN Files: CA, CAPLUS, USPATFULL

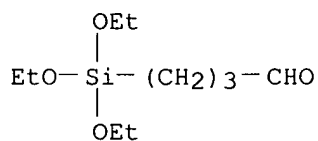


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 100:34694

L117 ANSWER 3 OF 10 REGISTRY COPYRIGHT 2002 ACS
 RN 88276-92-0 REGISTRY
 CN Butanal, 4-(triethoxysilyl)- (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C10 H22 O4 Si
 LC STN Files: CA, CAPLUS, USPATFULL

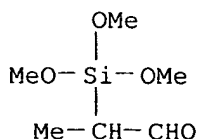


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 100:34694

L117 ANSWER 4 OF 10 REGISTRY COPYRIGHT 2002 ACS
 RN 88276-91-9 REGISTRY
 CN Propanal, 2-(trimethoxysilyl)- (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C6 H14 O4 Si
 LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, USPATFULL
 (*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:253724
REFERENCE 2: 131:116290
REFERENCE 3: 122:214132
REFERENCE 4: 113:231460
REFERENCE 5: 100:34694

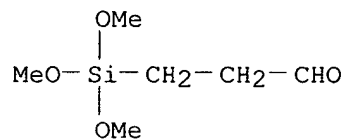
L117 ANSWER 5 OF 10 REGISTRY COPYRIGHT 2002 ACS

RN 88276-90-8 REGISTRY

CN Propanal, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C6 H14 O4 Si

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, USPATFULL
(*File contains numerically searchable property data)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1967 TO DATE)
5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:253724
REFERENCE 2: 131:116290
REFERENCE 3: 122:214132
REFERENCE 4: 113:231460
REFERENCE 5: 100:34694

L117 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2002 ACS

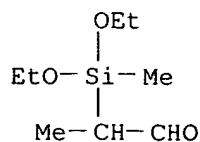
RN 88276-88-4 REGISTRY

CN Propanal, 2-(diethoxymethylsilyl)- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C8 H18 O3 Si

LC STN Files: CA, CAPLUS, USPATFULL

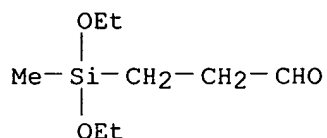


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 100:34694

L117 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2002 ACS
RN 88276-87-3 REGISTRY
CN Propanal, 3-(diethoxymethylsilyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C8 H18 O3 Si
LC STN Files: CA, CAPLUS, USPATFULL

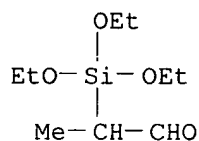


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 100:34694

L117 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2002 ACS
RN 88276-84-0 REGISTRY
CN Propanal, 2-(triethoxysilyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C9 H20 O4 Si
LC STN Files: CA, CAPLUS, USPATFULL

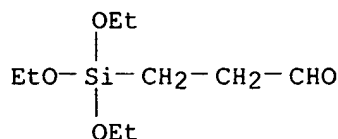


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 100:34694

L117 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2002 ACS
RN 88276-83-9 REGISTRY
CN Propanal, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C9 H20 O4 Si
LC STN Files: BEILSTEIN*, CA, CAPLUS, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 100:34694

L117 ANSWER 10 OF 10 REGISTRY COPYRIGHT 2002 ACS

RN 2550-04-1 REGISTRY

CN Silane, triethoxy-2-propenyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Silane, allyltriethoxy- (6CI, 7CI, 8CI)

OTHER NAMES:

CN 2-Propenyltriethoxysilane

CN 3-(Triethoxysilyl)propene

CN A 0564

CN A 0564 (coupling agent)

CN Allyltriethoxysilane

CN Triethoxyallylsilane

FS 3D CONCORD

MF C9 H20 O3 Si

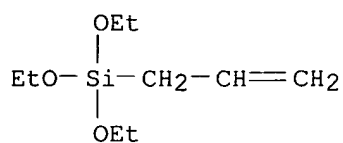
CI COM

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST,
CSCHEM, DETHERM*, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, MSDS-OHS,
SPECINFO, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

167 REFERENCES IN FILE CA (1967 TO DATE)
21 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
167 REFERENCES IN FILE CAPLUS (1967 TO DATE)
24 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:134829

REFERENCE 2: 136:107196

REFERENCE 3: 136:78989

REFERENCE 4: 136:7809

REFERENCE 5: 135:371835

REFERENCE 6: 135:295965
 REFERENCE 7: 135:167055
 REFERENCE 8: 135:137541
 REFERENCE 9: 135:129562
 REFERENCE 10: 135:33563

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(FILE 'HOME' ENTERED AT 12:44:28 ON 30 APR 2002)
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 12:44:40 ON 30 APR 2002

L1 E HEVESI L/AU
 92 S E3,E4
 E JEANMART L/AU
 L2 3 S E3,E4
 E REMACLE J/AU
 L3 218 S E3-E7,E13
 L4 140 S ALLYLTRICHLOROSILANE OR ALLYL() (TRICHLOROSILANE OR TRICHLORO
 L5 3 S 5 () (HEXENYLTRICHLOROSILANE OR HEXENYL() (TRICHLOROSILANE OR T
 L6 5 S HEXENYLTRICHLOROSILANE OR HEXENYL() (TRICHLOROSILANE OR TRICHL
 L7 5 S 7() (OCTENYLTRICHLOROSILANE OR OCTENYL() (TRICHLOROSILANE OR TR
 L8 16 S OCTENYLTRICHLOROSILANE OR OCTENYL() (TRICHLOROSILANE OR TRICHL
 L9 1 S L1-L3 AND L4-L8

FILE 'REGISTRY' ENTERED AT 12:51:59 ON 30 APR 2002

L10 3 S 107-37-9 OR 18817-29-3 OR 52217-52-4
 L11 25 S (107-37-9 OR 18817-29-3 OR 52217-52-4)/CRN
 L12 1 S L11 AND 1/NC
 L13 24 S L11 NOT L12

FILE 'HCAPLUS' ENTERED AT 12:55:25 ON 30 APR 2002

L14 229 S L10 OR L11
 L15 3 S TRICHLORO()7() ((OCT 1 ENYLSILANE) OR OCTENYLSILANE)
 L16 4 S TRICHLORO 5 HEXENYLSILANE
 L17 0 S PROPEN 3 YLTRICHLOROSILANE
 L18 0 S PROPEN 3 YL TRICHLOROSILANE
 L19 0 S PROPEN 3 YL TRICHLORO SILANE
 L20 0 S TRICHLORO 2() (PROPENYLSILANE OR PROPENYL SILANE)
 L21 259 S L4-L8,L14,L15,L16
 L22 1 S L1-L3 AND L21
 L23 1 S L9,L22
 E OXIDATION/CW
 L24 198841 S E3
 E OXIDATION/CT
 E E3+ALL
 L25 177492 S E4,E3+NT
 L26 99443 S E41+NT OR E42+NT OR E43+NT OR E44+NT OR E45+NT OR E46+NT
 L27 6 S L21 AND L24-L26
 L28 5 S E48+NT AND L21
 L29 11 S L27,L28
 L30 13 S (OXIDAT? OR OXIDIZ? OR OXIDIS?) AND L21
 L31 20 S L29,L30
 L32 4 S L31 AND ?ALDEHYD?
 L33 2 S L31 AND ?PERMANGANAT?
 L34 1 S L31 AND ?PERIODAT?

FILE 'REGISTRY' ENTERED AT 13:02:07 ON 30 APR 2002

L35 1 S 7722-64-7
L36 1 S 7790-28-5
L37 1 S 13465-41-3
L38 90 S 13465-41-3/CRN
L39 1 S 13444-71-8
L40 101 S 13444-71-8/CRN

FILE 'HCAPLUS' ENTERED AT 13:02:43 ON 30 APR 2002

L41 2 S L35-L40 AND L21
E PERMANGANATE/CT
E E6+ALL
L42 8539 S E11+NT
E PERIODATE/CT
E E5+ALL
L43 97 S E1
L44 30 S E2,E3
E E2+ALL
E E4+ALL
E E3+ALL
L45 96 S E2
L46 2 S L42-L45 AND L21
L47 4 S L32-L34,L41,L46
L48 3 S L47 NOT L23
L49 16 S L31-L34,L41,L46 NOT L47
SEL DN AN 1 10 11 14
L50 4 S E1-E10
L51 2 S L21 AND KMNO4
L52 2 S L21 AND NAI04
L53 5 S L23,L50-L52
L54 31 S L21 AND ?ALDEHYDE?
E ALDEHYDE/CT
E E15+ALL
L55 27 S L21 AND E3+NT
L56 1 S L21 AND E177+NT
L57 27 S L55,L56
L58 9 S L54 NOT L57
SEL DN AN 5
L59 1 S L58 AND E1-E3
L60 2 S L59,L23
L61 6 S L53,L60
L62 6 S L61 AND L1-L9,L14-L34,L41-L61

FILE 'REGISTRY' ENTERED AT 13:19:08 ON 30 APR 2002

L63 STR
L64 0 S L63
L65 STR L63
L66 0 S L65

FILE 'HCAPLUS' ENTERED AT 13:20:51 ON 30 APR 2002
SEL RN L23

FILE 'REGISTRY' ENTERED AT 13:20:54 ON 30 APR 2002

L67 10 S E4-E13
L68 STR L65
L69 50 S L68
L70 STR L68
L71 50 S L70
L72 STR L70
L73 0 S L72
L74 STR L70
L75 50 S L74
L76 594574 S SI/ELS AND (O OR CL OR BR OR F OR I)/ELS
L77 50 S L70 SAM SUB=L76

L78 50 S L68 OR L74
 L79 50 S L68 OR L74 SAM SUB=L76
 L80 378147 S L68 FUL
 L81 30254 S L74 FUL
 L82 403549 S L80,L81
 L83 0 S L72 SAM SUB=L82
 L84 55 S L72 FUL SUB=L82
 L85 STR
 L86 2 S L85 CSS SAM SUB=L82
 L87 293 S L85 CSS FUL SUB=L82
 SAV L84 TEMP TRAN833/A
 SAV L87 TEMP TRAN833A/A

FILE 'HCAPLUS' ENTERED AT 13:32:38 ON 30 APR 2002

L88 29 S L84
 L89 796 S L87
 L90 0 S L21 AND L88
 L91 1 S L88 AND L89
 L92 0 S L88 AND (L35-L40,L42-L45 OR KMNO4 OR NAI04 OR PERMANGANAT? OR
 L93 24 S L84/P
 L94 1 S L91 AND L93
 L95 0 S L88 AND L24-L26
 L96 2 S L88 AND OXID?
 SEL DN AN 2
 L97 1 S L96 AND E14-E16
 L98 8 S L62,L91,L94,L97
 L99 27 S L88 NOT L98
 SEL DN AN 1
 L100 1 S E17-E19
 L101 9 S L98,L100 AND L1-L9,L14-L34,L41-L62,L88-L100
 E DNA MICROARRAY TECHNOLOGY/CT
 E E3+ALL
 L102 3269 S E4+NT
 L103 3811 S E6-E14/BI
 E COMBINATORIAL/CT
 E E5+ALL
 L104 1628 S E3+NT
 L105 3057 S E3/BI
 E E4+ALL
 L106 5896 S E1+NT
 L107 2259 S E6+NT
 L108 4282 S E5+NT
 E HIGH THROUGHPUT/CT
 E E5+ALL
 L109 340 S E1
 L110 2207 S E1/BI
 L111 0 S L88,L90 AND L102-L110
 L112 1 S L21 AND L102-L110
 L113 9 S L101,L112
 SEL HIT RN

FILE 'REGISTRY' ENTERED AT 13:51:30 ON 30 APR 2002

L114 15 S E1-E15
 L115 3 S L114 AND L10
 L116 2 S L114 AND L35-L40
 L117 10 S L114 AND L82 NOT L115

FILE 'REGISTRY' ENTERED AT 13:53:40 ON 30 APR 2002

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 13:54:53 ON 30 APR 2002

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FILE LAST UPDATED: 29 Apr 2002 (20020429/ED)

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=> d l113 all hitstr tot

L113 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2002 ACS

AN 2002:299811 HCAPLUS

TI A scanning probe study of some short chain self-assembled alkylsilane films

AU Li, Jingxin; Horton, J. Hugh

CS Department of Chemistry, Queen's University, Kingston, ON, K7L 3N6, Can.

SO Journal of Materials Chemistry (2002), 12(5), 1268-1273

CODEN: JMACEP; ISSN: 0959-9428

PB Royal Society of Chemistry

DT Journal

LA English

CC 66 (Surface Chemistry and Colloids)

AB Trichloroalkylsilanes readily form self-assembled monolayers (SAMs) on mica surfaces. The present work uses scanning probe methods (at. force microscopy (AFM), chem. force microscopy (CFM) and nanoindentation) to study aspects of the assembly process and the properties of some short chain forms of these self-assembled monolayers. The deposition of propyltrichlorosilane ($\text{CH}_3\text{CH}_2\text{CH}_2\text{SiCl}_3$, PTS) and allyltrichlorosilane ($\text{H}_2\text{C}=\text{CHCH}_2\text{SiCl}_3$, ATS) at varying temps. (-78 .degree.C to +25 .degree.C) on mica substrates has been examd. The ATS films were subsequently modified by oxidn. to form a -COOH terminated species. These films were characterized by chem. force microscopy using functionalized tips at varying pH values. In addn., nanoindentation was utilized to study the Young's modulus and hardness of the films. We find that at low deposition temps., smooth overlayers of these short chain films are formed, without the formation of polymerised aggregates that are seen at higher temps. The surface ordering also appears to be higher under these conditions. The surface pKa of the oxidized ATS is larger than that of the longer chain analog previously characterised by chem. force microscopy. Nanoindentation can readily distinguish between ordered and polymerised aggregates on the surface.

L113 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2002 ACS

AN 2002:169108 HCAPLUS

DN 136:235824

TI Surface treatment activation of glass substrates by oxidation

with aldehyde groups and fixation of coupling agents for
bio-chips micro-arrays

IN Hevesi, Laszlo; Jeanmart, Laurent; Remacle,
Jose

PA A.S.B.L. Facultes Universitaires Notre-Dame de la Paix, Belg.

SO Eur. Pat. Appl., 15 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C03C017-34

CC 57-1 (Ceramics)

Section cross-reference(s): 3, 9

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1184349	A1	20020306	EP 2000-870184	20000901
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	WO 2002018288	A1	20020307	WO 2001-BE59	20010406
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRAI EP 2000-870184 A 20000901

AB Micro-arrays for bio-ships are prepd. by submitting a solid support to oxidn. of chem. groups present on the surface to allow the formation of aldehyde groups on the surface covalently coupling upon the aldehyde group capture mols. designed for the detection, the quantification and/or the recovery of complementary target biol. or chem. mols. The covalent binding produces an array with a d. of at least 4, 10, 16, 20 or more discrete regions per cm² of solid substrate surface, each of the discrete surface regions being bound with one species of capture mols.

ST surface oxidn aldehyde group coupling agent glass
substrate microarray

IT Cytomegalovirus
(DNA sequence; surface treatment activation of glass substrates by oxidn. with aldehyde groups and fixation of coupling agents for biochips microarrays)

IT Antibodies
Antigens
Haptens

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(capture mol.; surface treatment activation of glass substrates by oxidn. with aldehyde groups and fixation of coupling agents for biochips microarrays)

IT DNA sequences
(coupling agents; surface treatment activation of glass substrates by oxidn. with aldehyde groups and fixation of coupling agents for biochips microarrays)

IT Liver
(hepatocyte, mRNA source; surface treatment activation of glass substrates by oxidn. with aldehyde groups and fixation of coupling agents for biochips microarrays)

IT Silanes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)

- (olefinic, surface-modifier; surface treatment activation of glass substrates by **oxidn.** with **aldehyde** groups and fixation of coupling agents for biochips microarrays)
- IT Nucleotides, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(sequences, capture mol.; surface treatment activation of glass substrates by **oxidn.** with **aldehyde** groups and fixation of coupling agents for biochips microarrays)
- IT mRNA
RL: ANT (Analyte); ANST (Analytical study)
(sequences; surface treatment activation of glass substrates by **oxidn.** with **aldehyde** groups and fixation of coupling agents for biochips microarrays)
- IT **Permanganates**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(soln.; surface treatment activation of glass substrates by **oxidn.** with **aldehyde** groups and fixation of coupling agents for biochips microarrays)
- IT **Combinatorial chemistry**
DNA microarray technology
Formyl group
Glass substrates
Surface treatment
(surface treatment activation of glass substrates by **oxidn.** with **aldehyde** groups and fixation of coupling agents for biochips microarrays)
- IT **Oxidation**
(surface; surface treatment activation of glass substrates by **oxidn.** with **aldehyde** groups and fixation of coupling agents for biochips microarrays)
- IT 107-37-9, Allyltrichlorosilane 18817-29-3
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(coupling agents; surface treatment activation of glass substrates by **oxidn.** with **aldehyde** groups and fixation of coupling agents for biochips microarrays)
- IT 9013-20-1, Streptavidin
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(cy5-conjugate, coupling agents; surface treatment activation of glass substrates by **oxidn.** with **aldehyde** groups and fixation of coupling agents for biochips microarrays)
- IT 2056-98-6, DCTP 86303-26-6, Biotin-16-dUTP
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(labeling; surface treatment activation of glass substrates by **oxidn.** with **aldehyde** groups and fixation of coupling agents for biochips microarrays)
- IT 108-88-3, Toluene, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; surface treatment activation of glass substrates by **oxidn.** with **aldehyde** groups and fixation of coupling agents for biochips microarrays)
- IT 16940-66-2, Sodium borohydride
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(surface treatment activation of glass substrates by **oxidn.** with **aldehyde** groups and fixation of coupling agents for biochips microarrays)
- IT 7722-64-7, Potassium permanganate 7790-28-5,
Sodium periodate (NaIO₄) 52217-52-4,

7-Octenyltrichlorosilane

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)

(surface treatment; surface treatment activation of glass substrates by oxidn. with aldehyde groups and fixation of coupling agents for biochips microarrays)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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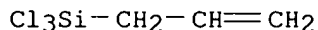
IT 107-37-9, Allyltrichlorosilane 18817-29-3

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)

(coupling agents; surface treatment activation of glass substrates by oxidn. with aldehyde groups and fixation of coupling agents for biochips microarrays)

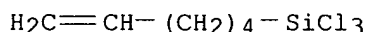
RN 107-37-9 HCAPLUS

CN Silane, trichloro-2-propenyl- (9CI) (CA INDEX NAME)



RN 18817-29-3 HCAPLUS

CN Silane, trichloro-5-hexenyl- (8CI, 9CI) (CA INDEX NAME)



IT 7722-64-7, Potassium permanganate 7790-28-5,

Sodium periodate (NaIO₄) 52217-52-4,

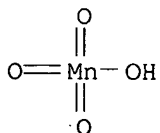
7-Octenyltrichlorosilane

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)

(surface treatment; surface treatment activation of glass substrates by oxidn. with aldehyde groups and fixation of coupling agents for biochips microarrays)

RN 7722-64-7 HCAPLUS

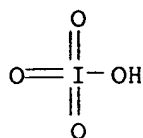
CN Permanganic acid (HMnO₄), potassium salt (8CI, 9CI) (CA INDEX NAME)



● K

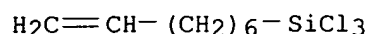
RN 7790-28-5 HCAPLUS

CN Periodic acid (HIO₄), sodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

RN 52217-52-4 HCAPLUS
 CN Silane, trichloro-7-octenyl- (9CI) (CA INDEX NAME)



L113 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:522294 HCAPLUS

DN 135:253724

TI Enzyme stabilization by covalent binding in nanoporous sol-gel glass for nonaqueous biocatalysis

AU Wang, Ping; Dai, Sheng; Waezsada, S. D.; Tsao, Alice Y.; Davison, Brian H.
 CS Department of Chemical Engineering, University of Akron, Akron, OH, 44325, USA

SO Biotechnology and Bioengineering (2001), 74(3), 249-255
 CODEN: BIBIAU; ISSN: 0006-3592

PB John Wiley & Sons, Inc.

DT Journal

LA English

CC 7-7 (Enzymes)

AB A unique nanoporous sol-gel glass possessing a highly ordered porous structure (with a pore size of 153 .ANG. in diam.) was examd. for use as a support material for enzyme immobilization. A model enzyme, .alpha.-chymotrypsin, was efficiently bound onto the glass via a bifunctional ligand, trimethoxysilylpropanal, with an active enzyme loading of 0.54%. The glass-bound chymotrypsin exhibited greatly enhanced stability both in aq. soln. and org. solvents. The half-life of the glass-bound .alpha.-chymotrypsin was > 1000-fold higher than that of the native enzyme, as measured either in aq. buffer or anhyd. methanol. The enhanced stability in methanol, which excludes the possibility of enzyme autolysis, particularly reflected that the covalent binding provides effective protection against enzyme inactivation caused by structural denaturation. In addn., the activity of the immobilized .alpha.-chymotrypsin was also much higher than that of the native enzyme in various org. solvents. From these results, it appears that the glass-enzyme complex developed in the present work can be used as a high-performance biocatalyst for various chem. processing applications, particularly in org. media.

ST chymotrypsin immobilization stabilization solvent

IT Solvents

(enzyme stabilization by covalent binding in nanoporous sol-gel glass for nonaq. biocatalysis)

IT Glass, biological studies

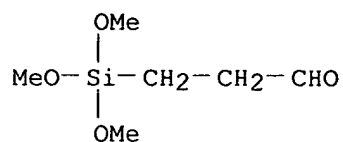
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(enzyme stabilization by covalent binding in nanoporous sol-gel glass for nonaq. biocatalysis)

IT Immobilization, biochemical

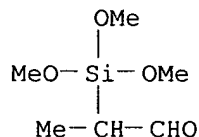
(enzyme; enzyme stabilization by covalent binding in nanoporous sol-gel

glass for nonaq. biocatalysis)
IT 9004-07-3, .alpha.-Chymotrypsin
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(enzyme stabilization by covalent binding in nanoporous sol-gel glass for nonaq. biocatalysis)
IT 88276-90-8 88276-91-9
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(enzyme stabilization by covalent binding in nanoporous sol-gel glass for nonaq. biocatalysis)
IT 67-56-1, Methanol, miscellaneous 75-05-8, Acetonitrile, miscellaneous 110-54-3, Hexane, miscellaneous 540-84-1, Isooctane
RL: MSC (Miscellaneous)
(enzyme stabilization by covalent binding in nanoporous sol-gel glass for nonaq. biocatalysis)
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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(29) Wang, P; Nat Biotechnol 1997, V15, P789 HCAPLUS
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(32) Zhao, D; J Am Chem Soc 1998, V120, P6024 HCAPLUS
IT 88276-90-8 88276-91-9
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(enzyme stabilization by covalent binding in nanoporous sol-gel glass for nonaq. biocatalysis)
RN 88276-90-8 HCAPLUS
CN Propanal, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



RN 88276-91-9 HCAPLUS

CN Propanal, 2-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



L113 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:481355 HCAPLUS

DN 133:199155

TI Chemical Modification of Self-Assembled Monolayers by Exposure to Soft X-rays in Air

AU Kim, Tae K.; Yang, Xiao M.; Peters, Richard D.; Sohn, B. H.; Nealey, Paul F.

CS Department of Chemical Engineering and Center for Nanotechnology, University of Wisconsin, Madison, WI, 53706, USA

SO Journal of Physical Chemistry B (2000), 104(31), 7403-7410

CODEN: JPCBFK; ISSN: 1089-5647

PB American Chemical Society

DT Journal

LA English

CC 66-3 (Surface Chemistry and Colloids)

Section cross-reference(s): 74

AB Methyl-, vinyl-, and trifluoroacetoxy-terminated self-assembled monolayers (SAMs) of alkylsiloxanes on SiO_x/Si substrates were exposed to soft X-rays (0-4000 mJ/cm²) at air pressures from 2 .times. 10⁻² to 2 torr. The exposed and unexposed monolayers were characterized by using advancing-contact-angle measurements of water, ellipsometry, and XPS. No significant differences in the thicknesses of the monolayers were obsd. under any exposure conditions. Advancing-contact angles of water (.theta.a) on all of the monolayers did not change with increasing dose up to 2000 mJ/cm² for exposures performed at 2 .times. 10⁻² torr. A 15% loss of fluorine was obsd. from the CF₃COO-terminated SAMs at this pressure at a dose of 4000 mJ/cm². The .theta.a decreased monotonically with dose for all monolayers exposed at 0.5, 1, and 2 torr of air pressure. The rate of decrease of .theta.a increased with increasing air pressure. A simple kinetic model based on competing oxidn. and crosslinking reactions of reactive surface species fit the data well. The model adequately described the asymptotic value of the contact angle at high doses for the three exposure pressures and was insightful for the anal. of the role of oxygen in surface-modification reactions. Loss of fluorine from the CF₃COO-terminated SAMs followed the same trends as the contact-angle data. XPS data showed that hydroxyl (C-OH) and aldehyde (CH:O) groups were incorporated onto the surface of the SAMs upon irradiation at 0.5, 1, and 2 torr of air pressure, irrespectively of the initial terminal groups of the SAMs. The hydroxyl groups were shown to be reactive for the formation of bilayer structures. These results are relevant for the optimization of chem. contrast and sensitivity in imaging layers based on SAMs for nanolithog. techniques using ionizing radiation.

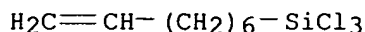
ST self assembled monolayer alkylsiloxane reactivity x ray lithog

- IT Contact angle
Crosslinking
Radiolysis
Self-assembled monolayers
Surface reaction
X-ray
X-ray lithography
(chem. modification of self-assembled monolayers by exposure to soft x-rays in air)
- IT Oxidation
(surface; chem. modification of self-assembled monolayers by exposure to soft x-rays in air)
- IT 112-04-9D, Octadecyltrichlorosilane, reaction product with silica substrate 407-25-0D, Trifluoroacetic anhydride, reaction product with hydroborated reaction product of octenyltrichlorosilane and silica substrate 14044-65-6D, reaction product with reaction product of octenyltrichlorosilane and silica substrate 52217-52-4D, 7-Octenyltrichlorosilane, reaction product with silica substrate and subsequent hydroboration and trifluoracetylation product 79769-48-5D, 11-Bromoundecyltrichlorosilane, reaction product with silica substrate
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(chem. modification of self-assembled monolayers by exposure to soft x-rays in air)
- IT 7631-86-9, Silica, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(coatings; chem. modification of self-assembled monolayers by exposure to soft x-rays in air)
- IT 7440-21-3, Silicon, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(substrates; chem. modification of self-assembled monolayers by exposure to soft x-rays in air)
- RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
- RE
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 - (20) Seshadri, K; J Phys Chem 1996, V100, P15900 HCAPLUS
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 - (25) Zharnikov, M; Phys Chem Chem Phys 1999, V1, P3163 HCAPLUS
- IT 52217-52-4D, 7-Octenyltrichlorosilane, reaction product with silica substrate and subsequent hydroboration and trifluoracetylation product

RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(chem. modification of self-assembled monolayers by exposure to soft x-rays in air)

RN 52217-52-4 HCAPLUS

CN Silane, trichloro-7-octenyl- (9CI) (CA INDEX NAME)



L113 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2002 ACS

AN 1994:158175 HCAPLUS

DN 120:158175

TI Biological recognition layers on solid phases and their preparation

IN Barner, Richard; Huber, Walter; Huebscher, Josef; Hurst, Juerg; Schlatter, Daniel

PA Hoffmann-La Roche, F., und Co. A.-G., Switz.

SO Eur. Pat. Appl., 15 pp.

CODEN: EPXXDW

DT Patent

LA German

IC ICM G01N033-543

ICS G01N033-547; G01N033-531

CC 9-10 (Biochemical Methods)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 578148	A2	19940112	EP 1993-110595	19930702
	EP 578148	A3	19940914		
	EP 578148	B1	20000419		
	R: BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT				
	CA 2098960	AA	19940111	CA 1993-2098960	19930622
	ES 2146596	T3	20000816	ES 1993-110595	19930702
	JP 06174722	A2	19940624	JP 1993-170419	19930709
	US 5986066	A	19991116	US 1997-878105	19970618
PRAI	CH 1992-2178	A	19920710		
	US 1993-85716	B1	19930630		
	US 1995-492257	B1	19950622		

AB A layer of analyte-recognizing mols. is covalently immobilized on a solid phase in such a way that the analyte-recognizing regions of these mols. are oriented away from the surface of the solid phase and are not altered by the covalent binding, and the regions of these mols. which do not recognize the analyte are bound to special binding sites on the solid phase (or on an org. layer of carrier mols. coating the solid phase). The analyte-recognizing mols. are addnl. photochem. crosslinked to one another and to the orienting carrier mols. with the special binding sites. Thus, a sensor surface for immobilization of an antibody to hepatitis B surface antigen was prep'd. as follows. The sensor surface was silanized with octenyltrichlorosilane and treated with KMnO_4 and NaIO_4 to oxidize the terminal double bonds to carboxy groups. The carboxy groups were activated with ClCO_2Et and esterified with N-hydroxysuccinimide for immobilization of protein A and bovine serum albumin. The surface was then treated with 6-(p-azidobenzenesulfonylamino)caproic acid N-hydroxysuccinimide ester (prepn. given), followed by the antibody. Exposure to an Hg vapor lamp for 30 s resulted in crosslinking of protein A, albumin, and the Fc region of the antibody without altering the antigen-binding sites of the antibody.

ST antibody photochem immobilization immunoassay

IT Hydroxyl group

(heterobifunctional linking agent contg., for antibody or receptor immobilization, ligand-recognizing site orientation away from solid

- phase in relation to)
- IT Linking agents
(heterobifunctional, for antibody or receptor immobilization, ligand-recognizing site orientation away from solid phase in relation to)
- IT Adsorption
Immobilization, biochemical
(of antibodies and receptors, ligand-recognizing site orientation away from solid phase in)
- IT Crosslinking
(of immobilized antibodies and receptors, ligand-recognizing site orientation away from solid phase in relation to)
- IT Functional groups
(phenylazido, heterobifunctional linking agent contg., for antibody or receptor immobilization, ligand-recognizing site orientation away from solid phase in relation to)
- IT Albumins, reactions
Antibodies
RL: RCT (Reactant)
(photochem. immobilization of, on immunosensor)
- IT Proteins, specific or class
RL: PROC (Process)
(A, photochem. immobilization of, on immunosensor)
- IT Functional groups
(ammonio, heterobifunctional linking agent contg., for antibody or receptor immobilization, ligand-recognizing site orientation away from solid phase in relation to)
- IT Virus, animal
(hepatitis B, surface antigen of, antibody to, photochem. immobilization of)
- IT Antigens
RL: ANST (Analytical study)
(hepatitis B surface, antibody to, photochem. immobilization of)
- IT Biosensors
(immunol., antibody photochem. immobilization on)
- IT Carboxyl group
(ionized, heterobifunctional linking agent contg., for antibody or receptor immobilization, ligand-recognizing site orientation away from solid phase in relation to)
- IT Crosslinking
(photochem., of immobilized antibodies and receptors, ligand-recognizing site orientation away from solid phase in relation to)
- IT Functional groups
(sulfonyl, heterobifunctional linking agent contg., for antibody or receptor immobilization, ligand-recognizing site orientation away from solid phase in relation to)
- IT Amino group
(tertiary, heterobifunctional linking agent contg., for antibody or receptor immobilization, ligand-recognizing site orientation away from solid phase in relation to)
- IT 3600-76-8
RL: RCT (Reactant)
(amidation by, of aminocaproic acid)
- IT 85287-36-1
RL: RCT (Reactant)
(amidation by, of aminoethyldithiopyridine)
- IT 6427-66-3, p-Azidobenzoic acid
RL: RCT (Reactant)
(amidation by, of aminomethylpyridine)
- IT 153311-96-7
RL: RCT (Reactant)
(amidation by, of benzyl aminocaproate)

IT 108-30-5, Succinic anhydride, biological studies
RL: RCT (Reactant)
(amidation by, of cystamine deriv.)

IT 60-32-2, .epsilon.-Aminocaproic acid
RL: RCT (Reactant)
(amidation of, by azidobenzenesulfonyl chloride)

IT 3731-51-9, 2-Aminomethylpyridine
RL: RCT (Reactant)
(amidation of, by azidobenzoic acid)

IT 83578-21-6
RL: RCT (Reactant)
(amidation of, by azidobenzoylaminocaproic acid)

IT 5515-01-5 15231-41-1
RL: RCT (Reactant)
(amidation of, by nitrosulfobenzoate)

IT 56-17-7, Cystamine dihydrochloride
RL: ANST (Analytical study)
(condensation of, with azidobenzenesulfonyl chloride)

IT 15001-44-2, p-Azidobenzenesulfonyl chloride
RL: ANST (Analytical study)
(condensation of, with cystamine)

IT 82436-78-0
RL: RCT (Reactant)
(esterification of, by aminocaproic acid deriv.)

IT 6066-82-6, N-Hydroxysuccinimide
RL: RCT (Reactant)
(esterification of, with carboxypropionylcystamine deriv.)

IT 153311-87-6 153311-94-5
RL: RCT (Reactant)
(esterification of, with hydroxysuccinimide)

IT 107-15-3, 1,2-Ethanediamine, reactions
RL: RCT (Reactant)
(esterification of, with nitrosulfobenzoate and succinic anhydride)

IT 153447-97-3, Octenyltrichlorosilane
RL: RCT (Reactant)
(immunosensor coating with and oxidn. of, for antibody immobilization)

IT 153312-06-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and carboxymethylation of)

IT 153311-98-9P 153312-02-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and catalytic hydrogenation of)

IT 153312-01-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion to free acid)

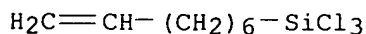
IT 153311-84-3P 153312-03-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and esterification with hydroxysuccinimide)

IT 153311-99-0P 153312-05-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and substitution reaction with azide)

IT 153311-86-5P 153311-89-8P 153311-91-2P 153311-92-3P 153311-93-4P
153311-95-6P 153312-04-0P 153312-07-3P 153312-08-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for antibody and receptor immobilization, ligand-recognizing site orientation away from solid phase in relation to)

IT 85287-37-2
RL: RCT (Reactant)
(substitution reaction of, with hydrazine)

AN 1994:77832 HCAPLUS
 DN 120:77832
 TI Synthesis and characterization of alkylsilane-branched polysiloxanes and their self-assembling monolayers on silicon wafers
 AU Mao, G.; Sun, F.; Grainger, D. W.
 CS Dep. Chem. Biol. Sci., Oregon Grad. Inst. Sci. Technol., Beaverton, OR, 97006-1999, USA
 SO Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.) (1993), 34(1), 134-5
 CODEN: ACPPAY; ISSN: 0032-3934
 DT Journal
 LA English
 CC 35-8 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 37
 AB Polysiloxanes contg. (trichlorosilyl)octyl and poly(oxyethylene) side chains were prepd. by direct addn. of (trichlorosilyl)octene and poly(ethylene glycol) allyl Me ether to alkyl hydrogen polysiloxanes. The polymers form bound ultrathin films on oxidized Si wafers. The film-forming behavior is influenced by side chain chem. and content.
 ST polyoxyethylene trichlorosilyloctyl polysiloxane prepn property; ultrathin film polyoxyethylene siloxane; silicon wafer ultrathin polysiloxane film
 IT Contact angle
 (of (trichlorosilyl)octyl poly(oxyethylene)-polysiloxane ultrathin films, with water)
 IT Glass temperature and transition
 (of (trichlorosilyl)octyl poly(oxyethylene)-polysiloxanes)
 IT Siloxanes and Silicones, compounds
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (alkyl hydrogen, reaction products, with poly(oxyethylene) allyl Me ether and (trichlorosilyl)octene, prepn. and ultrathin film-forming behavior of)
 IT Siloxanes and Silicones, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (polyoxyalkylene-, (trichlorosilyl)octyl group-contg., graft, prepn. and ultrathin film-forming behavior of)
 IT Polyoxyalkylenes, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (siloxane- (trichlorosilyl)octyl group-contg., graft, prepn. and ultrathin film-forming behavior of)
 IT 27252-80-8DP, Poly(ethylene glycol) allyl methyl ether, reaction products with alkyl hydrogen polysiloxanes
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and reaction of, with (trichlorosilyl)octene)
 IT 52217-52-4DP, Silane, trichloro-7-octenyl-, reaction products with graft poly(oxyethylene)-alkyl hydrogen polysiloxanes
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and ultrathin film-forming behavior of)
 IT 52217-52-4DP, Silane, trichloro-7-octenyl-, reaction products with graft poly(oxyethylene)-alkyl hydrogen polysiloxanes
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and ultrathin film-forming behavior of)
 RN 52217-52-4 HCAPLUS
 CN Silane, trichloro-7-octenyl- (9CI) (CA INDEX NAME)



L113 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2002 ACS

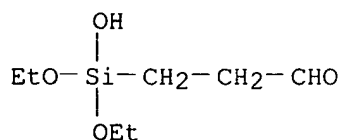
AN 1993:254997 HCAPLUS

DN 118:254997

TI Formation of aldehyde groups on the surface of titanium-containing silica

AU Kol'tsov, S. I.; Brykalov, A. V.

CS St. Petersburg. Tekhnol. Inst., St. Petersburg, Russia
 SO Zh. Obshch. Khim. (1992), 62(8), 1733-8
 CODEN: ZOKHA4; ISSN: 0044-460X
 DT Journal
 LA Russian
 CC 29-6 (Organometallic and Organometalloidal Compounds)
 AB The effect of mol. stratification of silica-gel surface titanoxylayers on the reaction of (.gamma.-aminopropyl)triethoxysilane with surface hydroxyl groups was examd.; the reaction is accompanied by an increase in the total amt. of bound groups. During further modification by deazotization and subsequent oxidn. of these hydroxyl groups, a process of quant. conversion of terminal amino groups into stable aldehyde groups takes place. Aldehyde-contg. groups thus formed on silica gel increase the enzymic activity of immobilized pepsin significantly.
 ST silica gel titanoxyl aldehyde formation
 IT Aldehydes, preparation
 RL: FORM (Formation, nonpreparative)
 (formation of, on surface of titanium-contg. silica)
 IT Silica gel, reactions
 RL: RCT (Reactant)
 (reaction of titanium-contg., with (aminopropyl)triethoxysilane and subsequent conversion of, to aldehyde groups)
 IT 7440-32-6, Titanium, uses
 RL: USES (Uses)
 (formation of aldehyde groups on surface of silica gel contg.)
 IT 125702-51-4DP, silica-bound
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and deazotization of)
 IT 147766-59-4DP, silica-bound
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and oxidn. of, aldehyde by)
 IT 147766-60-7DP, silica-bound
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 IT 919-30-2
 RL: RCT (Reactant)
 (reaction of, with hydroxy groups on surface of titanium-contg. silica gel)
 IT 147766-60-7DP, silica-bound
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 RN 147766-60-7 HCAPLUS
 CN Propanal, 3-(diethoxyhydroxysilyl)- (9CI) (CA INDEX NAME)

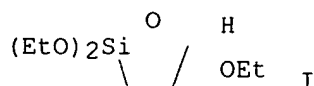


L113 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2002 ACS
 AN 1984:34694 HCAPLUS
 DN 100:34694
 TI Aldehyde containing hydrolyzable silanes
 IN Petty, Herbert Euell
 PA Union Carbide Corp. , USA
 SO Eur. Pat. Appl., 43 pp.
 CODEN: EPXXDW
 DT Patent
 LA English

IC C07F007-18
 CC 29-6 (Organometallic and Organometalloidal Compounds)
 Section cross-reference(s): 35

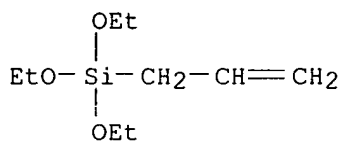
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 89690	A1	19830928	EP 1983-102886	19830323
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	US 4424392	A	19840103	US 1982-361189	19820324
	CA 1215716	A1	19861223	CA 1983-423394	19830311
	BR 8301357	A	19831129	BR 1983-1357	19830318
	AU 8312635	A1	19830929	AU 1983-12635	19830321
	AU 556855	B2	19861120		
	JP 58172394	A2	19831011	JP 1983-47346	19830323
	EP 183280	A2	19860604	EP 1985-116531	19830323
	EP 183280	A3	19880608		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	IN 158046	A	19860823	IN 1983-CA348	19830323
PRAI	US 1982-361189		19820324		
GI	EP 1983-102886		19830323		

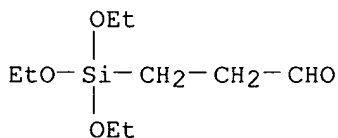


- AB The title compds. R3-aSiR1aQCHO (R = C1-4 alkoxy; R1 = C1-4 alkyl; Q = divalent org. bridging group; a = 0-2) were prepd. by Rh-catalyzed hydroformylation of R3-aSiR1aY (Y = ethylenically unsatd. org. radical). Thus, a mixt. of (EtO)3SiCH:CH2, P(OPh)3, and an activated Rh catalyst was subjected to 1:1 H2-CO at 80-90.degree. to give 81 wt.% (EtO)3SiCH2CH2CHO, 3 wt.% (EtO)3SiCH(CHO)Me, and 16 wt.% I. This mixt. of products was used to bond a phenolic resin to microscope slides. Also hydroformylated were (MeO)3SiCH:CH2, (EtO)2Si(Me)CH:CH2, (EtO)3SiCH2CH:CH2, and (MeO)3Si(CH2)3O2CCMe:CH2.
- ST aldehyde hydrolyzable silane; vinylsilane trialkoxy hydroformylation; alkoxy-silyl aldehyde; alkanal trialkoxy-silyl
- IT Aldehydes, preparation
 RL: PREP (Preparation)
 (alkoxy-silyl-substituted)
- IT Hydroformylation
 (of alkenylalkoxy-silanes)
- IT Hydroformylation catalysts
 (rhodium with tri-Ph phosphite, for alkenylalkoxy-silanes)
- IT 88386-09-8
 RL: PROC (Process)
 (binding of, to glass by formyl-substituted silanes)
- IT 7440-16-6, uses and miscellaneous
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts, with tri-Ph phosphite, for hydroformylation of alkenylalkoxy-silanes)
- IT 78-08-0 2530-85-0 2550-04-1 2768-02-7 5507-44-8
 RL: RCT (Reactant)
 (hydroformylation of)
- IT 101-02-0
 RL: RCT (Reactant)
 (hydroformylation of alkenylalkoxy-silanes in presence of rhodium catalyst and)
- IT 88276-83-9P 88276-84-0P 88276-85-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)

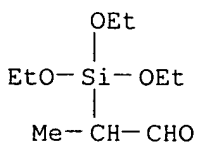
(prepn. and binding of phenolic resins to glass by)
 IT 15184-27-7P 88276-86-2P 88276-87-3P 88276-88-4P
 88276-89-5P 88276-90-8P 88276-91-9P
 88276-92-0P 88276-93-1P 88276-94-2P 88276-95-3P
 88276-96-4P 88276-97-5P 88289-29-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 IT 122-51-0
 RL: RCT (Reactant)
 (reaction of, with (triethoxysilyl)alkanals)
 IT 998-30-1
 RL: RCT (Reactant)
 (reaction of, with acrolein di-Me acetal)
 IT 6044-68-4
 RL: RCT (Reactant)
 (reaction of, with triethoxysilane)
 IT 2550-04-1
 RL: RCT (Reactant)
 (hydroformylation of)
 RN 2550-04-1 HCAPLUS
 CN Silane, triethoxy-2-propenyl- (9CI) (CA INDEX NAME)



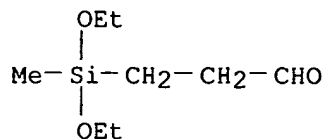
IT 88276-83-9P 88276-84-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and binding of phenolic resins to glass by)
 RN 88276-83-9 HCAPLUS
 CN Propanal, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



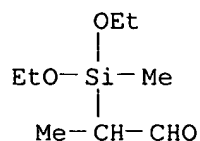
RN 88276-84-0 HCAPLUS
 CN Propanal, 2-(triethoxysilyl)- (9CI) (CA INDEX NAME)



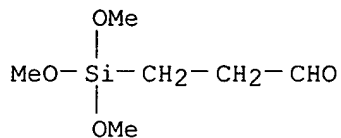
IT 88276-87-3P 88276-88-4P 88276-90-8P
 88276-91-9P 88276-92-0P 88276-93-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 RN 88276-87-3 HCAPLUS
 CN Propanal, 3-(diethoxymethylsilyl)- (9CI) (CA INDEX NAME)



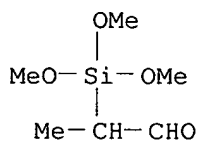
RN 88276-88-4 HCAPLUS
CN Propanal, 2-(diethoxymethylsilyl)- (9CI) (CA INDEX NAME)



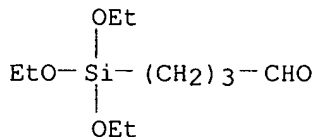
RN 88276-90-8 HCAPLUS
CN Propanal, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



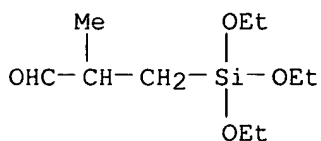
RN 88276-91-9 HCAPLUS
CN Propanal, 2-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



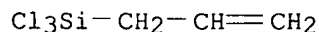
RN 88276-92-0 HCAPLUS
CN Butanal, 4-(triethoxysilyl)- (9CI) (CA INDEX NAME)



RN 88276-93-1 HCAPLUS
CN Propanal, 2-methyl-3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



L113 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2002 ACS
 AN 1968:90182 HCAPLUS
 DN 68:90182
 TI Hydrophilation of glass surfaces. I. Possible promoters of filmwise
 condensation
 AU Blackman, Lionel C. F.; Harrop, R.
 CS Chem. Res. Div., Brit. Railways Res. Dep., London, Engl.
 SO J. Appl. Chem. (1968), 18(2), 37-43
 CODEN: JACHAU
 DT Journal
 LA English
 CC 66 (Surface Chemistry and Colloids)
 AB The bonding tenacity of various silanes and quaternary ammonium compds. to
 glass after steaming was detd. from ir and contact angle measurements to
 be in the order: polysiloxane > Cl₃SiH > quaternary ammonium compds. >
 Cl₂SiH₂ > ClSiH₃ > EtOSiH₃. All compds. were inefficient promoters of
 filmwise condensation on the glass surface. Oxidn. of
 H₂C:CHCH₂SiCl₃ with KMnO₄ which was previously bonded to the
 glass surface yielded the most strongly bonded hydrophilic coating.
 Oriented monolayer formation is more complex for glass than for metal
 substrates.
 ST GLASS HYDROPHILATION; HYDROPHILATION GLASS
 IT Glass
 RL: PRP (Properties)
 (condensation on, of water, effect of treatment with ammonium compds.
 and silane derivs. on)
 IT Siloxanes, properties
 RL: PRP (Properties)
 (methyl, condensation of water on glass treated with)
 IT Condensation, physical
 (of water, on glass treated with ammonium compds. and silane derivs.)
 IT 57-09-0 75-78-5 75-79-6 78-10-4 78-62-6 112-04-9 1119-94-4
 2031-67-6 13465-78-6
 RL: PRP (Properties)
 (condensation of water on glass treated with)
 IT 107-37-9
 RL: PRP (Properties)
 (condensation of water on glass treated with oxidized)
 IT 107-37-9
 RL: PRP (Properties)
 (condensation of water on glass treated with oxidized)
 RN 107-37-9 HCAPLUS
 CN Silane, trichloro-2-propenyl- (9CI) (CA INDEX NAME)



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 L1 92 S E3,E4
 E JEANMART L/AU
 L2 3 S E3,E4
 E REMACLE J/AU
 L3 218 S E3-E7,E13
 L4 140 S ALLYLTRICHLOROSILANE OR ALLYL() (TRICHLOROSILANE OR TRICHLORO

L5 3 S 5 () (HEXENYLTRICHLOROSILANE OR HEXENYL() (TRICHLOROSILANE OR T
L6 5 S HEXENYLTRICHLOROSILANE OR HEXENYL() (TRICHLOROSILANE OR TRICHL
L7 5 S 7() (OCTENYLTRICHLOROSILANE OR OCTENYL() (TRICHLOROSILANE OR TR
L8 16 S OCTENYLTRICHLOROSILANE OR OCTENYL() (TRICHLOROSILANE OR TRICHL
L9 1 S L1-L3 AND L4-L8

FILE 'REGISTRY' ENTERED AT 12:51:59 ON 30 APR 2002

L10 3 S 107-37-9 OR 18817-29-3 OR 52217-52-4
L11 25 S (107-37-9 OR 18817-29-3 OR 52217-52-4)/CRN
L12 1 S L11 AND 1/NC
L13 24 S L11 NOT L12

FILE 'HCAPLUS' ENTERED AT 12:55:25 ON 30 APR 2002

L14 229 S L10 OR L11
L15 3 S TRICHLORO()7() ((OCT 1 ENYLSILANE) OR OCTENYLSILANE)
L16 4 S TRICHLORO 5 HEXENYLSILANE
L17 0 S PROPEN 3 YLTRICHLOROSILANE
L18 0 S PROPEN 3 YL TRICHLOROSILANE
L19 0 S PROPEN 3 YL TRICHLORO SILANE
L20 0 S TRICHLORO 2() (PROPENYLSILANE OR PROPENYL SILANE)
L21 259 S L4-L8, L14, L15, L16
L22 1 S L1-L3 AND L21
L23 1 S L9, L22
E OXIDATION/CW
L24 198841 S E3
E OXIDATION/CT
E E3+ALL
L25 177492 S E4, E3+NT
L26 99443 S E41+NT OR E42+NT OR E43+NT OR E44+NT OR E45+NT OR E46+NT
L27 6 S L21 AND L24-L26
L28 5 S E48+NT AND L21
L29 11 S L27, L28
L30 13 S (OXIDAT? OR OXIDIZ? OR OXIDIS?) AND L21
L31 20 S L29, L30
L32 4 S L31 AND ?ALDEHYD?
L33 2 S L31 AND ?PERMANGANAT?
L34 1 S L31 AND ?PERIODAT?

FILE 'REGISTRY' ENTERED AT 13:02:07 ON 30 APR 2002

L35 1 S 7722-64-7
L36 1 S 7790-28-5
L37 1 S 13465-41-3
L38 90 S 13465-41-3/CRN
L39 1 S 13444-71-8
L40 101 S 13444-71-8/CRN

FILE 'HCAPLUS' ENTERED AT 13:02:43 ON 30 APR 2002

L41 2 S L35-L40 AND L21
E PERMANGANATE/CT
E E6+ALL
L42 8539 S E11+NT
E PERIODATE/CT
E E5+ALL
L43 97 S E1
L44 30 S E2, E3
E E2+ALL
E E4+ALL
E E3+ALL
L45 96 S E2
L46 2 S L42-L45 AND L21
L47 4 S L32-L34, L41, L46
L48 3 S L47 NOT L23
L49 16 S L31-L34, L41, L46 NOT L47

SEL DN AN 1 10 11 14
L50 4 S E1-E10
L51 2 S L21 AND KMNO4
L52 2 S L21 AND NAI04
L53 5 S L23,L50-L52
L54 31 S L21 AND ?ALDEHYDE?
E ALDEHYDE/CT
E E15+ALL
L55 27 S L21 AND E3+NT
L56 1 S L21 AND E177+NT
L57 27 S L55,L56
L58 9 S L54 NOT L57
SEL DN AN 5
L59 1 S L58 AND E1-E3
L60 2 S L59,L23
L61 6 S L53,L60
L62 6 S L61 AND L1-L9,L14-L34,L41-L61

FILE 'REGISTRY' ENTERED AT 13:19:08 ON 30 APR 2002

L63 STR
L64 0 S L63
L65 STR L63
L66 0 S L65

FILE 'HCAPLUS' ENTERED AT 13:20:51 ON 30 APR 2002

SEL RN L23

FILE 'REGISTRY' ENTERED AT 13:20:54 ON 30 APR 2002

L67 10 S E4-E13
L68 STR L65
L69 50 S L68
L70 STR L68
L71 50 S L70
L72 STR L70
L73 0 S L72
L74 STR L70
L75 50 S L74
L76 594574 S SI/ELS AND (O OR CL OR BR OR F OR I)/ELS
L77 50 S L70 SAM SUB=L76
L78 50 S L68 OR L74
L79 50 S L68 OR L74 SAM SUB=L76
L80 378147 S L68 FUL
L81 30254 S L74 FUL
L82 403549 S L80,L81
L83 0 S L72 SAM SUB=L82
L84 55 S L72 FUL SUB=L82
L85 STR
L86 2 S L85 CSS SAM SUB=L82
L87 293 S L85 CSS FUL SUB=L82
SAV L84 TEMP TRAN833/A
SAV L87 TEMP TRAN833A/A

FILE 'HCAPLUS' ENTERED AT 13:32:38 ON 30 APR 2002

L88 29 S L84
L89 796 S L87
L90 0 S L21 AND L88
L91 1 S L88 AND L89
L92 0 S L88 AND (L35-L40,L42-L45 OR KMNO4 OR NAI04 OR PERMANGANAT? OR
L93 24 S L84/P
L94 1 S L91 AND L93
L95 0 S L88 AND L24-L26
L96 2 S L88 AND OXID?
SEL DN AN 2

L97 1 S L96 AND E14-E16
L98 8 S L62,L91,L94,L97
L99 27 S L88 NOT L98
SEL DN AN 1
L100 1 S E17-E19
L101 9 S L98,L100 AND L1-L9,L14-L34,L41-L62,L88-L100
E DNA MICROARRAY TECHNOLOGY/CT
E E3+ALL
L102 3269 S E4+NT
L103 3811 S E6-E14/BI
E COMBINATORIAL/CT
E E5+ALL
L104 1628 S E3+NT
L105 3057 S E3/BI
E E4+ALL
L106 5896 S E1+NT
L107 2259 S E6+NT
L108 4282 S E5+NT
E HIGH THROUGHPUT/CT
E E5+ALL
L109 340 S E1
L110 2207 S E1/BI
L111 0 S L88,L90 AND L102-L110
L112 1 S L21 AND L102-L110
L113 9 S L101,L112
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 13:51:30 ON 30 APR 2002

L114 15 S E1-E15
L115 3 S L114 AND L10
L116 2 S L114 AND L35-L40
L117 10 S L114 AND L82 NOT L115

FILE 'REGISTRY' ENTERED AT 13:53:40 ON 30 APR 2002

FILE 'HCAPLUS' ENTERED AT 13:54:53 ON 30 APR 2002

L118 0 S L1-L3 AND L88,L89 NOT L113
L119 6 S L1-L3 AND L102-L110 NOT L113